

RONALD A. UNDERWOOD et al.

Application No. 09/512,742

Page 2

AMENDMENT TO CLAIMS

In the claims:

1. - 51. (previously cancelled)

52. (previously added) A method for treating an intervertebral disc of a patient, comprising:

- a) advancing an active electrode through an annulus fibrosus of the disc to form an opening in the annulus fibrosus;
- b) positioning the active electrode within a nucleus pulposus of the disc;
- c) applying a high frequency voltage between the active electrode and a return electrode, wherein the voltage is sufficient to contract at least a portion of the nucleus pulposus; and
- d) while continuing said step c), withdrawing the active electrode from the disc via the opening in the annulus fibrosus, wherein the voltage is sufficient to at least partially close the opening in the annulus fibrosus.

53. (previously added) The method of claim 52, further comprising sealing the opening in the annulus fibrosus as a result of the voltage applied during said step d).

54. (previously added) The method of claim 52, wherein the voltage is sufficient to effect contraction of collagen fibers in the nucleus pulposus or the annulus fibrosus.

55. (previously added) The method of claim 52, wherein the opening in the annulus fibrosus is partially closed via contraction of collagen fibers in the annulus fibrosus.

56. (previously added) The method of claim 52, wherein contraction of the nucleus pulposus is effected via contraction of collagen fibers in the nucleus pulposus.

RONALD A. UNDERWOOD et al.

Application No. 09/512,742

Page 3

57. (previously added) The method of claim 52, further comprising: delivering an electrically conductive fluid to the active electrode, wherein the electrically conductive fluid provides a current flow path between the active electrode and the return electrode.

58. (previously added) The method of claim 52, wherein during said step c) at least a portion of the nucleus pulposus is heated to a temperature in the range of from about 60° C to 70° C.

59. (previously added) The method of claim 52, wherein said step c) comprises applying the voltage in the range of from about 45 volts rms to 60 volts rms.

60. (new) A method for treating tissue within a patient's spine comprising:  
positioning an electrode in contact with, or in close proximity to, an opening in an annulus; and  
applying a high frequency voltage to the electrode, the voltage being sufficient to at least partially close said opening.

61. (New) The method of claim 60 wherein the opening extends completely through a wall of the annulus.

62. (New) The method of claim 61 wherein the step of applying is performed as the electrode is withdrawn from the opening.

63. (New) The method of claim 60 further comprising: prior to the positioning step, percutaneously introducing the electrode to the patient's spine.

64. (New) The method of claim 60 further comprising: positioning a return electrode on the outer surface of the patient's body, and conducting electric current from the electrode, through the patient's body, to the return electrode.

RONALD A. UNDERWOOD et al.  
Application No. 09/512,742  
Page 4

65. (New) The method of claim 60 wherein the step of positioning the electrode comprises positioning a single, active electrode in at least close proximity to the annulus.

66. (New) The method of claim 60 wherein the step of positioning the electrode comprises positioning a plurality of electrically isolated electrode terminals in at least close proximity to the annulus.

67. (New) The method of claim 60 further comprising: prior to the positioning step, anteriorly introducing the electrode to the patient's spine.

68. (New) The method of claim 60 wherein the electrode is disposed on an instrument shaft, and wherein the applying step comprises applying the high frequency voltage between the electrode and a return electrode, the return electrode disposed on the instrument shaft.